

Amendment to the Specification:

Please amend the next to last paragraph of page 5 which begins on line 24, as follows:

The applicable locations, trajectory, or orientation are entered by the surgeon using operator console 18 in conjunction with the monitor 30. For example, the surgeon may use a trackball or mouse (not shown) in connection with a cursor displayed on the monitor 30 to designate a target and entry point with respect to one or more displayed images. Once these points have been defined, a computer system [[20]] can calculate and display the desired trajectory.

Please amend the second complete paragraph of page 6 which begins on line 11, as follows:

With continuing reference to Figure 1A and further reference to Figure 1B, an operator console 18 houses a computer system [[20]]. Alternately, the computer system can be remotely located and connected with the control console 18 by cabling. The computer system includes a data memory 22 which contains data indicative of a three-dimensional image of the patient. Because the data can be visualized as a three-dimensional rectangular grid, selectable orthogonal and other oblique planes of the data can be readily withdrawn from the memory using conventional technology.

Please amend the first full paragraph of page 8 which begins on line 6 to read as follows:

Coordinate transform [[29]] 160 transforms or matches the image and tool reference frames. The location and orientation of the tool are connected through the transform [[29]] 160 with the position indicator system to indicate the direction in which the tool must be moved to reach a desired position. By determining the location and orientation of the tool, the location and orientation of the indicators such as LEDs 200, 202, 204, and 206 are also determined. Stated another way, the location

and orientation of the indicators are determined. Knowing this information, the appropriate LEDs are illuminated to indicate the direction in which the tool should be moved.

Please amend the third full paragraph on page 12 which begins on line 21 to read as follows:

In operation, reference points are defined with respect to the patient's anatomy and images of the patient are obtained. Depending on the requirements of a particular surgical operation, the surgeon designates a target location, entry point, trajectory, and/or rotation with respect to the image data using operator console 18. In cranial surgery, for example, the surgeon may designate the target as a point within a lesion and define an entry point on the exterior of the patient's anatomy. The surgeon may also elect to adjust the gain and threshold of the system indicators. After the patient is moved to the operating room, the patient and image reference frames are registered. The transforms between the patient, image, and tool reference frames are then calculated by the computer.